

## MEMORANDUM

TO: Bill Maxwell, U.S. Environmental Protection Agency,  
OAQPS (MD-13)

FROM: Mary Lalley, ERG/RTP

DATE: June 18, 1997

SUBJECT: Final Summary of May 22, 1997 Meeting of the ICCR  
Process Heater Work Group

---

### 1.0 PURPOSE

The purpose of the meeting was to allow meeting attendees to discuss various activities of the ICCR Process Heater Work Group. Topics of discussion included a presentation by the Testing and Monitoring Protocol Work Group, the scope of the ICCR, a preliminary finding on gas-fired units, database review, and future meetings.

### 2.0 LOCATION AND DATE

The meeting was held on May 22, 1997 in Durham, North Carolina.

### 3.0 MEETING ATTENDEES

Meeting attendees include representatives of the OAQPS Emission Standards Division, trade associations, environmental groups, and state agencies. A complete list of attendees (with their affiliation) is included as attachment 1.

#### 4.0 SUMMARY OF DISCUSSION

Meeting discussions are summarized in the following sections:

4.1 Testing and Monitoring Protocol Work Group Presentation

4.2 ICCR Scope

4.3 Input to Solid Waste Definition Subgroup

4.4 Combustion Unit Survey Recipients

4.5 Documentation of Preliminary Finding of MACT Floor For Gas-Fired Process Heaters

4.6 Database Review

##### 4.1 Testing and Monitoring Protocol Work Group Presentation

Terry Harrison presented the first draft of the Testing and Monitoring Protocol (TMP) Work Group's analysis of hazardous air pollutants (HAPs) emitted from process heaters fired by natural gas or refinery gas. Handouts from the presentation are included as attachment 2. Mr. Harrison explained that the table indicates which HAPs, based on the TMP Work Group's experience, are expected to be emitted. For each HAP expected to be emitted, test methods used to measure emissions are listed. Mr. Harrison clarified that the test methods listed are not necessarily recommended by the TMP Work Group, but have been used in the past. Mr. Harrison added that the TMP Work Group expects to be asked which test methods should be used in the future and stated that the TMP Work Group will be better able to answer that question once the list of pollutants of interest is narrowed.

The table provided also includes, for HAPs not expected to be emitted, the reason the pollutant is excluded from the list of expected HAPs. One reason for excluding a pollutant is if test data indicate that it is not emitted in significant quantities. Mr. Harrison explained that the Work Group has not defined "significant."

Mr. Harrison pointed out the table provided applies only to natural gas and refinery gas emissions from indirect-fired process heaters. He explained that the TMP Work Group does not currently have the expertise to address other fuels or direct-fired process heaters. Mr. Harrison suggested that the source work groups work together to develop a common list of pollutants of interest.

Mr. Harrison stated that other efforts of the TMP Work Group will include developing a cost model to predict testing costs for budgetary purposes. Mr. Harrison stressed that the model will be designed to be used for budgetary purposes only and will not provide exact estimates with great detail. The TMP Work Group is also investigating formaldehyde test methods and reviewing preliminary data from the Gas Research Institute (GRI). The TMP Work Group expects to complete these efforts by mid-July.

4.1.2 Questions on TMP Work Group Presentation Tom O'Conner asked if the table should be interpreted as stating that pollutants are expected to be emitted from burning natural gas or refinery gas or natural gas and refinery gas. John Ogle explained that the Process Heater Work Group is currently attempting to show that natural gas and refinery gas are equivalent and therefore the pollutants are expected to be emitted from natural gas or refinery gas.

Bruno Ferraro asked how the Process Heater Work Group should approach developing a list of expected pollutants for materials other than natural gas and refinery gas, particularly, uncommon, complex mixtures with high heating values. Mr. Harrison suggested reviewing analyses of the materials, if available, especially for metals and chlorine. Mr. Harrison added that other work groups have requested expected pollutant lists for other standard fuels such as diesel fuel.

Bob Morris asked if a correlation between carbon number and potential HAP emissions has been developed. Mr. Harrison replied that models of combustibility are available. Bill Maxwell added that HAP emissions, unlike emissions of metals, depend on combustion conditions. John Ogle pointed out that the Petroleum Environmental Research Forum (PERF) data showed that combustion conditions do not affect HAP emissions. Roy Carwile suggested that combustion conditions have a greater effect on high molecular weight compounds. Several meeting attendees suggested sources of information on this subject including: Bob Hall (incinerator data); Larry Johnson (list of incinerability); and a PERF study on thermal oxidizers.

4.1.3 Discussion of Testing Concerns Roy Carwile expressed a concern regarding the ability to test for polycyclic organic matter (POM) and provided that this was an issue with previous MACT rule development. Jane Williams stated that POM is a priority for environmental groups. Ms. Williams stated that the work group must address POM because Congress directed EPA to list sources of POM. Ms. Williams stated that the Work Group cannot dismiss POM because it is difficult, but must identify and document the difficulties. Ms. Williams asked if the TMP Work Group will identify test methods that are available for POM compounds. Terry Harrison indicated that the TMP Work Group can investigate available test methods for specific individual POM compounds identified by the Work Group. Identifying test methods for every POM compound is an monumental task due to the large number of POM compounds and the ability to develop a test method for almost any compound given unlimited resources.

Bill Maxwell suggested that various pollutant lists available may aid the Work Group in focusing on specific pollutants. Mr. Maxwell stated that the Work Group should consider pollutants that have been tested for and those that have

not been tested for but may be present. Bruno Ferraro added that the combustion unit survey should provide insight into materials that are being burned and pollutants that can be expected to be emitted.

In response to questions from Work Group members, Jim Seebold explained that POM was not tested for during the PERF effort because POM was not defined. They did test for 18 PAHs.

Lee Gilmer stated that EPA and industry are not directed to consider individual POM compounds. Jane Williams agreed and stated that the Work Group needs to identify and prioritize POM compounds to consider. Fred Porter clarified that the guidance regarding POM is less than clear and Ms. Williams suggested that the Work Group develop and document a reasonable approach for dealing with the issue. Mr. Porter added that the ICCR is oriented towards giving work groups the responsibility to make decisions and recommendations.

Bruno Ferraro suggested screening for POM by testing for total VOC.

#### 4.2 ICCR Scope

Fred Porter predicted that the ICCR will not result in regulations for 189 pollutants but for a subset of HAPs developed based on rankings and significance of emissions. Mr. Porter pointed out that no more than nine HAPs are regulated under any existing standard. Jane Williams suggested that this approach is not consistent with the priorities established for the EPA by Congress. Mr. Porter clarified that he was not discussing the approach for MACT development but rather the resulting regulations. Mr. Porter stated that section 112 of the Clean Air Act requires reduction of HAPs, not a limit for each HAP and added that controlling one HAP usually results in reduction of all HAP emissions.

Roy Carwile stated that there are provisions for considering the quantity of pollutant emitted as well as the relevance of the pollutant to the regulated process. Jane Williams stated that industry may be interested in significant levels of a pollutants, but Congress is interested in significant health risk.

Arthur Lee stated that, based on his experience with other MACT standard development processes, he is confident that EPA will consider everything thoroughly. Mr. Lee pointed out that the Hazardous Organics NESHAP (HON) addresses over 100 pollutants.

Fred Porter stated that EPA must identify the highest priorities of the ICCR and address them first. Additional pollutants and sources will be addressed, but not everything can be addressed at once if the EPA is to meet court-ordered deadlines.

#### 4.3 Input to Solid Waste Definition Subgroup

Bill Maxwell explained that the Coordinating Committee formed a subgroup to develop an approach for defining "solid waste." The Process Heater Work Group is represented on the Solid Waste Definition Subgroup by John Ogle and Jane Williams. Mr. Maxwell solicited input from the Work Group for Mr. Ogle and Ms. Williams to provide to the Subgroup.

John Ogle added that one question facing the Subgroup is whether to develop a new definition of solid waste or expand the RCRA definition. Jane Williams pointed out that the Office of Solid Waste (OSW) is currently in the process of re-defining solid waste. Several Work Group members stated that EPA representatives should be included in the Subgroup to coordinate with other EPA offices.

Work Group members agreed that a Coordinating Committee subgroup should develop a single ICCR definition of solid waste.

Several Work Group members expressed the concern that without a deadline, the subgroup may take a long time to develop a definition.

Jane Williams provided that in the revised OSW definition considers anything in-process not to be discarded and therefore, not a waste. Ms. Williams stated that this exclusion may apply to a majority of process heaters. Bill Maxwell asked how this exclusion would apply if a material is produced at one facility and burned in a combustion device at another facility. Ms. Williams stated that since the material was transferred from one facility to another, it was traded and has value and was not discarded.

The Work Group agreed on three recommendations for John Ogle and Jane Williams to make to the Solid Waste Definition Subgroup: setting a time line for completing the definition; including a representative from the Office of General Counsel on the ad-hoc subgroup; and excluding materials that are "in process" from the definition.

#### 4.4 Combustion Unit Survey Recipients

John Ogle asked what should be done about facilities that did not receive a combustion unit survey. Bill Maxwell suggested that surveys may be submitted by the facilities voluntarily or the names and addresses for the facilities can be given to EPA and will be added to the recipient list.

Roy Carwile asked if it was intended that headquarters that received the survey complete it for all of their facilities. Bill Maxwell explained that the intention was to send the survey to the actual location of the facility to be surveyed. Survey recipients should fill out the survey for the facility listed on the first page of the survey.

#### 4.5 Documentation of Preliminary Finding of MACT Floor For Gas-Fired Process Heaters

Bill Maxwell suggested that the Work Group develop documentation for their preliminary finding that the MACT floor for gas-fired, indirect process heaters is no add-on control and good operating practices.

4.5.1 Definition of Gas Work Group members discussed how to define the hydrocarbon gas mixtures that are equivalent to natural gas. Lee Gilmer suggested defining the gas mixtures as "gases looked at within the constraints of the [PERF] study." Jane Williams stated that additional caveats would need to be added to this definition, including the constituents looked for and cautioned against extrapolating from the data available. Bruno Ferraro suggested that an operating temperature of the process heater should be included in the definition. Mr. Ferraro pointed out that heavier hydrocarbon compounds burned in a process heater with a relatively low operating temperature may result in different emissions than natural gas. John Ogle suggested that the finding should be for natural gas and gases with the same constituents. Jim Seebold suggested "hydrocarbon gaseous mixtures" as a possible definition. Bob Morris modified Mr. Seebold's definition to "hydrocarbon gaseous mixtures at ambient temperature." Bill Maxwell stated that it is not necessary to finalize the definition at this time.

4.5.2 Effect of NOx Controls John Ogle suggested included a statement regarding the effects of NOx controls on HAP emission. Lee Gilmer provided data for process heaters with and without NOx controls that showed an increase in CO emissions with a decrease in NOx emissions but no change in HAP emission. Mr. Gilmer added that some data for internal combustion engines showed a relationship between HAPs and CO. Bob Morris suggested that combustion conditions in process heaters are different than those



in internal combustion engines. Jane Williams stated that many questions need to be asked and answered regarding the data presented by the American Petroleum Institute. Ms. Williams added that the environmental caucus has questions regarding which compounds were targeted.

4.5.3 Content of Preliminary Finding Bill Maxwell suggested that the rational for the finding include the following:

- a statement on the equivalency of natural gas and other hydrocarbon gas mixtures;
- a statement that, based on industry knowledge, no add-on controls are used on gas-fired process heaters except for NOx control devices; and
- a statement that, based on available test data, controlling NOx emissions does not affect HAP emissions.

#### 4.6 Database Review

Bill Maxwell solicited comments from the Work Group on review of the ICCR inventory database. Bruno Ferraro asked what level of documentation will be required to make changes. Mr. Maxwell stated that specific instructions for recommending revisions are being developed and will be posted to the TTN.

The Work Group agreed to review the inventory database entries according to assignments made during the May 9 conference call and the guidance provided by the Coordinating Committee (attachment 3). Guidance was also provided from Coordinating Committee on review of the emission test database (attachment 4).

Mary Lalley reported that the state in which a facility is located was inadvertently left out of the process heater section of the inventory database. Ms. Lalley explained that the error

can be corrected by downloading a file called "STABFIX" from the TTN, copying STABFIX into the database and running the query provided. Instructions for using STABFIX are also provided on the TTN.

A presentation was given on using version 2.0 of the ICCR inventory database and Access software.

## 5.0 ACTION ITEMS

- Work Group members will review the process heater section of version 2.0 of the ICCR database according to the guidance provided by the Coordinating Committee (attachment 3). Members will review entries for the SCCs assigned previously (see minutes for May 9 conference call).
- ERG will develop specific instructions for providing database corrections, additions, and deletions to the EPA co-chair and post them to the TTN.
- Bill Maxwell will e-mail Work Group members a query to use to sort the database.

## 6.0 NEXT MEETINGS

- A meeting is tentatively scheduled for June 19 in Washington, D.C. One topic of discussion will be the status of database review.

**These minutes represent an accurate description of matters discussed and conclusions reached and include a copy of all reports received, issued, or approved at the May 22, 1997, meeting of the Process Heater Work Group. Bill Maxwell, EPA.**

## **Attachment 1**

### **MEETING ATTENDEES**

David Schanbacher, Office of Air Quality, Texas Natural  
Resource Conservation Commission (TNRCC)

Roy Carwile, Aluminum Company of America

Chuck Feerick, Exxon Company, USA

Bruno Ferraro, Grove Scientific Company

Lee Gilmer, Texaco, Inc.

Terry Harrison, EPA, Office of Air Quality Planning  
and Standards

Mary Lalley, Eastern Research Group

Arthur Lee, Texaco, Inc.

Bill Maxwell, EPA, Office of Air Quality Planning  
and Standards

Robert Morris, The Coastal Corporation

Tom O'Connor, National Grain and Feed Association

John Ogle, Dow Chemical Company

Fred Porter, EPA, Office of Air Quality Planning  
and Standards

Jim Seebold, Chevron Research and Technology Company

George Smith, EPA, Office of Air Quality Planning  
and Standards

Oliver Stanley, Cargill

Jane Williams, California Communities Against Toxics

**Attachment 2**  
**Handout for Testing and Monitoring Protocol**  
**Work Group Presentation**

## ICCR Process Heater Source Work Group

Attached is a table entitled HAPs Selection and Test Methods for Natural Gas and Refinery Gas Fired Process Heaters. The list contains the names of the 189 Hazardous Air Pollutants (HAPs) that have, based on experience, been screened for potential presence in emissions from natural gas and refinery gas fired boilers. This preliminary screening has been performed on the list by the Testing and Monitoring Protocol Work Group (TMPWG). This table is being forwarded to the Process Heater Source Work Group (SWG) for review and comment.

The table includes HAPs that may be present in these emissions. Additionally, a listing of testing methods that have been used and have the potential to quantify the HAPs presence in flue gas emissions are included.

For those HAPs that are not included in the list, a codified reason for their exclusion is provided. Exclusion codes include:

- 1- Compound is not expected to be emitted from source because basic chemical or physical principles do not favor its existence in source exhaust.
- 2 - Existing test data indicate that compound is not emitted in significant quantities from source.

Other exclusion codes are included as appropriate.

It should be noted that this table is general in its first draft and represents the extent of the TMPWG's knowledge and experience with emissions from natural gas and refinery gas fired process heaters. Please review carefully from a standpoint of those HAPs included as well as those HAPs excluded. The subgroup within the TMPWG that is responsible for the development of this table has included a preface that provides the sources of information utilized to develop the table, the rationale for exclusion codes, and the names of the TMPWG contact for the Process Heater SWG.

If we can be of service in any other fashion or if you have any questions concerning in the table, please contact the Lawrence Otwell (e-mail: "lpotwell@gapac.com") the TMPWG member who is monitoring the activities of your SWG.

## HAPS Selection and Test Methods for Source Category

Source Category: Natural Gas & Refinery Gas Fired Process Heaters

Instructions:

Place an "x" in column A for each compound which should be included in the list of applicable compounds for the source category. Then, enter the appropriate test method(s) in column E for each of the included compounds.

For compounds which should be excluded from the list, leave column A blank. Then, enter an explanation for their exclusion in column D. A list of exclusion codes is included to simplify this procedure.

Exclusion Codes:

- 1 - Compound is not expected to be emitted from source because basic chemical or physical principles do not favor its existence in source exhaust.
- 2 - Existing test data indicate that compound is not emitted in significant quantities from source.
- 3 - Other (Specify)
- 4 - Other (Specify)
- 5 - Other (Specify)

A	B	C	D	E
x	75070	Acetaldehyde		EPA 0011, CARB 430
	60355	Acetamide	1	
	75058	Acetonitrile	1	
	98862	Acetophenone	1	
	53963	2-Acetylaminofluorene	1	
	107028	Acrolein	1	
	79061	Acrylamide	1	
	79107	Acrylic acid	1	
	107131	Acrylonitrile	1	
	107051	Allyl chloride	1	
	92671	4-Aminobiphenyl	1	
	62533	Aniline	1	
	90040	o-Anisidine	1	
	1332214	Asbestos	1	
x	71432	Benzene		EPA 0030, 18; CARB 422
	92875	Benzidine	1	
	98077	Benzotrichloride	1	
	100447	Benzyl chloride	1	
	92524	Biphenyl	1	
	117817	Bis(2-ethylhexyl)phthalate (DEHP)	1	
	542881	Bis(chloromethyl)ether	1	

A	B	C	D	E
	75252	Bromoform	1	
	106990	1,3-Butadiene	2	
	156627	Calcium cyanamide	1	
	133062	Captan	1	
	63252	Carbaryl	1	
	75150	Carbon disulfide	1	
	56235	Carbon tetrachloride	1	
	463581	Carbonyl sulfide	1	
	120809	Catechol	1	
	133904	Chloramben	1	
	57749	Chlordane	1	
	7782505	Chlorine	1	
	79118	Chloroacetic acid	1	
	532274	2-Chloroacetophenone	1	
	108907	Chlorobenzene	1	
	510156	Chlorobenzilate	1	
	67663	Chloroform	1	
	107302	Chloromethyl methyl ether	1	
	126998	Chloroprene	1	
	1319773	Cresols/Cresylic acid (isomers and mixture)	2	
	95487	o-Cresol	2	
	108394	m-Cresol	2	
	106445	p-Cresol	2	
	98828	Cumene	2	
	94757	2,4-D, salts and esters	1	
	3547044	DDE	1	
	334883	Diazomethane	1	
	132649	Dibenzofurans	1	
	96128	1,2-Dibromo3-chloropropane	1	
	84742	Dibutylphthalate	1	
	106467	1,4-Dichlorobenzene(p)	1	
	91941	3,3-Dichlorobenzidene	1	
	111444	Dichloroethyl ether (Bis(2-chloroethyl)ether)	1	
	542756	1,3-Dichloropropene	1	
	62737	Dichlorvos	1	
	111422	Diethanolamine	1	
	121697	N,N-Diethyl aniline (N,N-Dimethylaniline)	1	
	64675	Diethyl sulfate	1	
	119904	3,3-Dimethoxybenzidine	1	
	60117	Dimethyl aminoazobenzene	1	
	119937	3,3--Dimethyl benzidine	1	
	79447	Dimethyl carbamoyl chloride	1	

A	B	C	D	E
	68122	Dimethyl formamide	1	
	57147	1,1-Dimethyl hydrazine	1	
	131113	Dimethyl phthalate	1	
	77781	Dimethyl sulfate	1	
	534521	4,6-Dinitroo-cresol, and salts	1	
	51285	2,4-Dinitrophenol	1	
	121142	2,4-Dinitrotoluene	1	
	123911	1,4-Dioxane (1,4-Diethyleneoxide)	2	
	122667	1,2-Diphenylhydrazine	1	
	106898	Epichlorohydrin (1-Chloro-2,3-epoxypropane)	1	
	106887	1,2-Epoxybutane	1	
	140885	Ethyl acrylate	1	
x	100414	Ethyl benzene		EPA 0030, 18; CARB 422
	51796	Ethyl carbamate (Urethane)	1	
	75003	Ethyl chloride (Chloroethane)	1	
	106934	Ethylene dibromide (Dibromoethane)	1	
	107062	Ethylene dichloride (1,2-Dichloroethane)	1	
	107211	Ethylene glycol	1	
	151564	Ethylene imine (Aziridine)	1	
	75218	Ethylene oxide	1	
	96457	Ethylene thiourea	1	
	75343	Ethylidene dichloride (1,1-Dichloroethane)	1	
x	50000	Formaldehyde		EPA 0011, CARB 430
	76448	Heptachlor	1	
	118741	Hexachlorobenzene	1	
	87683	Hexachlorobutadiene	1	
	77474	Hexachlorocyclopentadiene	1	
	67721	Hexachloroethane	1	
	822060	Hexamethylene-1,6-diisocyanate	1	
	680319	Hexamethylphosphoramide	1	
	110543	Hexane	1	
	302012	Hydrazine	1	
	7647010	Hydrochloric acid	1	
	7664393	Hydrogen fluoride (Hydrofluoric acid)	1	
	7783064	Hydrogen sulfide	1	
	123319	Hydroquinone	1	
	78591	Isophorone	1	
	58899	Lindane (all isomers)	1	
	108316	Maleic anhydride	1	
	67561	Methanol	1	
	72435	Methoxychlor	1	
	74839	Methyl bromide (Bromomethane)	1	



A	B	C	D	E
	74873	Methyl chloride (Chloromethane)	1	
	71556	Methyl chloroform (1,1,1-Trichloroethane)	1	
	78933	Methyl ethyl ketone (2-Butanone)	2	
	60344	Methyl hydrazine	1	
	74884	Methyl iodide (Iodomethane)	1	
	108101	Methyl isobutyl ketone (Hexone)	1	
	624839	Methyl isocyanate	1	
	80626	Methyl methacrylate	1	
	1634044	Methyl tert butyl ether	1	
	101144	4,4-Methylene bis(2-chloroaniline)	1	
	75092	Methylene chloride (Dichloromethane)	1	
	101688	Methylene diphenyl diisocyanate (MDI)	1	
	101779	4,4--Methylenedianiline	1	
x	91203	Naphthalene		EPA 0010; CARB 429
	98953	Nitrobenzene	1	
	92933	4-Nitrobiphenyl	1	
	100027	4-Nitrophenol	1	
	79469	2-Nitropropane	1	
	684935	N-Nitroso-Nmethylurea	1	
	62759	N-Nitrosodimethylamine	1	
	59892	N-Nitrosomorpholine	1	
	56382	Parathion	1	
	82688	Pentachloronitrobenzene (Quintobenzene)	1	
	87865	Pentachlorophenol	1	
x	108952	Phenol		EPA 0010; CARB 429(m)
	106503	p-Phenylenediamine	1	
	75445	Phosgene	1	
	7803512	Phosphine	1	
	7723140	Phosphorus	1	
	85449	Phthalic anhydride	1	
	1336363	Polychlorinated biphenyls (Aroclors)	1	
	1120714	1,3-Propane sultone	1	
	57578	beta-Propiolactone	1	
	123386	Propionaldehyde	1	
	114261	Propoxur (Baygon)	1	
	78875	Propylene dichloride (1,2-Dichloropropane)	1	
	75569	Propylene oxide	1	
	75558	1,2-Propylenimine (2-Methyl aziridine)	1	
	91225	Quinoline	1	
	106514	Quinone	1	
	100425	Styrene	1	
	96093	Styrene oxide	1	

A	B	C	D	E
	1746016	2,3,7,8-Tetrachlorodibenzo-p-dioxin	1	
	79345	1,1,2,2-Tetrachloroethane	1	
	127184	Tetrachloroethylene (Perchloroethylene)	1	
	7550450	Titanium tetrachloride	1	
x	108883	Toluene		EPA 0030, 18; CARB 422
	95807	2,4-Toluene diamine	1	
	584849	2,4-Toluene diisocyanate	1	
	95534	o-Toluidine	1	
	8001352	Toxaphene (chlorinated camphene)	1	
	120821	1,2,4-Trichlorobenzene	1	
	79005	1,1,2-Trichloroethane	1	
	79016	Trichloroethylene	1	
	95954	2,4,5-Trichlorophenol	1	
	88062	2,4,6-Trichlorophenol	1	
	121448	Triethylamine	1	
	1582098	Trifluralin	1	
	540841	2,2,4-Trimethylpentane	2	
	108054	Vinyl acetate	1	
	593602	Vinyl bromide	1	
	75014	Vinyl chloride	1	
	75354	Vinylidene chloride (1,1-Dichloroethylene)	1	
x	1330207	Xylenes (isomers and mixture)		EPA 0030, 18; CARB 422
x	95476	o-Xylenes		EPA 0030, 18; CARB 422
x	108383	m-Xylenes		EPA 0030, 18; CARB 422
x	106423	p-Xylenes		EPA 0030, 18; CARB 422
	N/A	Antimony Compounds	1	
	N/A	Arsenic Compounds (inorganic including arsine)	1	
	N/A	Beryllium Compounds	1	
	N/A	Cadmium Compounds	1	
	N/A	Chromium Compounds	1	
	N/A	Cobalt Compounds	1	
	N/A	Coke Oven Emissions	NA	
	N/A	Cyanide Compounds *1	1	
	N/A	Glycol ethers *2	1	
	N/A	Lead Compounds	1	
	N/A	Manganese Compounds	1	
	N/A	Mercury Compounds	1	
	N/A	Fine mineral fibers *3	1	
	N/A	Nickel Compounds	1	
x	N/A	Polycyclic Organic Matter *4		EPA 0010; CARB 429
	N/A	Radionuclides (including radon) *5	1	
	N/A	Selenium Compounds	1	



### **Attachment 3**

## **Guidance from Coordinating Committee for Inventory Database Review**

## INVENTORY DATABASE

### DRAFT GUIDANCE TO WORK GROUPS ON DATABASE REVIEW AND UPDATE

1. Identify readily apparent misclassified or misassigned units to the EPA.  
Corrections will be given to other Work Groups.
2. Identify classification issues associated with current SCC definitions, forwarding them to EPA.
3. Identify obvious errors and recommended corrections to the EPA.
4. Identify and suggest how to resolve easily identifiable duplicate facilities and duplicate combustion units.
5. Identify known facilities and combustion units not in the data base to the EPA for addition. (in correct electronic format).
6. EPA Source Work Group Co-Chairs are responsible for rapid corrections and dissemination.
7. Ensure that source of data used to arrive at recommendations is clear and reflected in backup to recommendations when made.

## DRAFT GUIDANCE TO WORK GROUPS ON INITIAL USE OF DATABASE

1. Characterize combustion unit population and develop model units for each combustor category.
  - Estimate the population
  - Identify preliminary subcategories
  - Develop model units
2. Identify control techniques.
3. Identify sources of test data by reviewing codes in inventory database. (Emissions data in the Emissions Database will be the primary source of information for developing emissions factors.)

INVENTORY DATABASE  
General Procedures for Changes

**Official Database V2.0 on CD  
(overall file and 1 file for each Source Work Group)**

**Source Work Group Reviews  
Database & Discusses Changes**

**Source Work Group EPA Co-Chair  
Coordinates within EPA**

**EPA gives Changes to Contractor to Implement**

**Versions 3.0, etc. Released on CD**

## INVENTORY DATABASE

### General Procedure for Changes -- Documentation

- Reason for making each change is documented by Source Work Group and given to EPA Co-Chair.
- EPA's contractor will keep electronic file documenting changes.
- Facilities removed will be moved to another file and annotated (i.e., why was it removed), not deleted.



## **Attachment 4**

### **Guidance from Coordinating Committee for Emission Test Database Review**

## EMISSIONS DATABASE

### PURPOSES OF INITIAL REVIEW

- To gain an appreciation of the interplay between criteria and HAP emissions generation and control.
- To help identify subcategories and the availability of information on control techniques.
- Assess adequacy of database for the development of representative emission factors
- To gain an appreciation of the amount of emission data available.
- To identify and fill obvious data gaps with various sources of information.
- To identify additional sources of data, to gather data from these sources, to include data as appropriate subject to quality assurance guidelines, and to recommend additional data-gathering steps to EPA.

## DRAFT GUIDANCE TO WORK GROUPS ON INITIAL REVIEW AND USE

1. Determine for which sources of HAPs and criteria pollutants test data are available.
2. Characterize availability of emission data for:
  - potential subcategories (e.g. combustor types, fuels)
  - control techniques evaluation
3. Determine obvious data gaps and gather available test reports to fill gaps.
4. Compile data from collected test reports for entry into emissions database.
5. Convert data to common units for comparison.
6. Summarize data for each subcategory, control technique, and pollutant.
7. Identify remaining data gaps and recommend an additional data collection program to the Coordinating Committee.

## EMISSIONS DATABASE

### PROCEDURES FOR MAKING CHANGES

- Similar to ICCR Inventory Database changes
- Changes and additions go through Source Work Group EPA Co-chair for inclusion in official database.